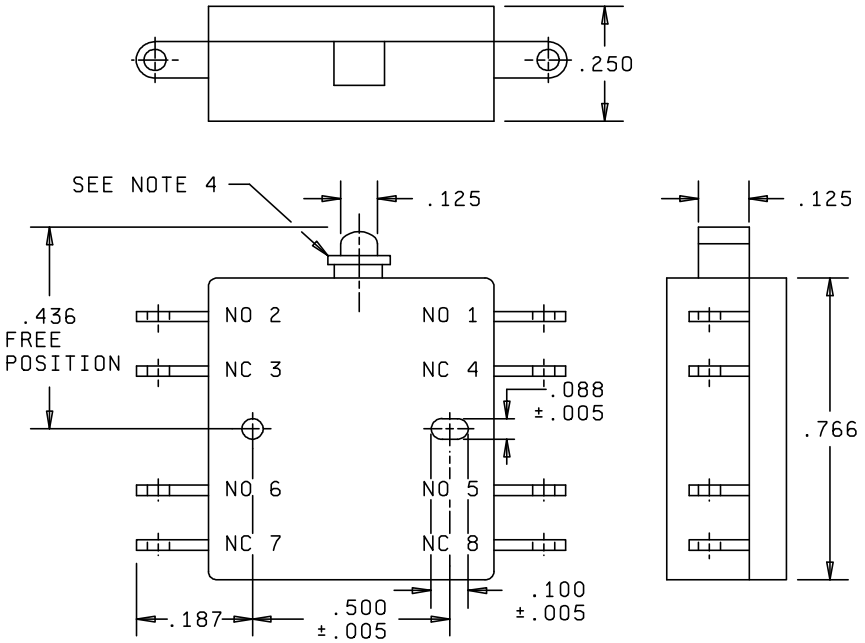
INCH-POUND
MIL-PRF-8805/77H
19 September, 2000
SUPERSEDING
MIL-PRF-8805/77G
3 September 1999

PERFORMANCE SPECIFICATION SHEET

SWITCHES, SENSITIVE, MOMENTARY, 4 CIRCUIT OR DPDT (10 AMPERES), UNSEALED

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification and MIL-PRF-8805.

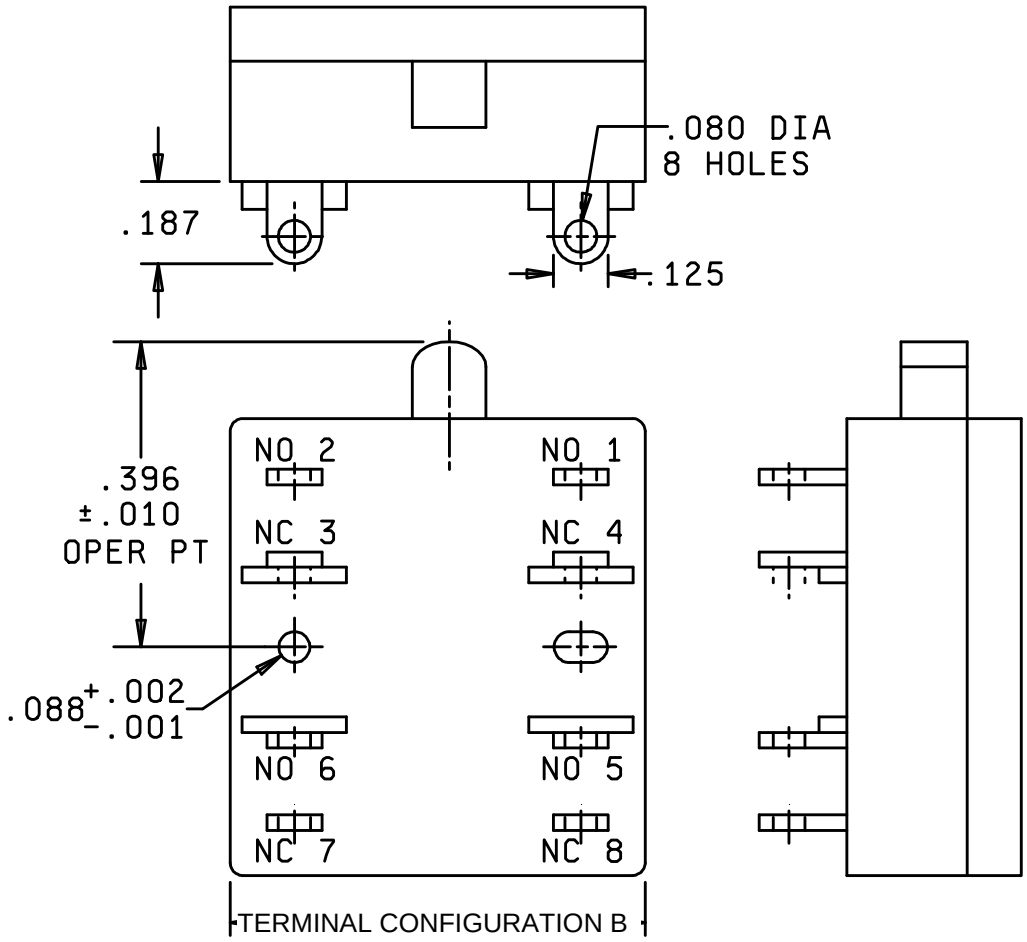


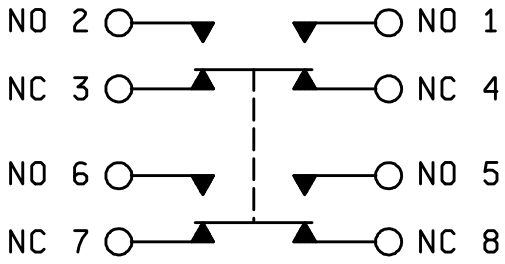
TERMINAL CONFIGURATION A

Inches	mm	Inches	mm	Inches	Mm	Inches	mm
.001	0.03	.080	2.03	.250	6.35	.500	12.70
.002	0.05	.088	2.24	.396	10.06	.766	19.46
.005	0.13	.125	3.18	.436	11.07	.781	19.84
.010	0.25	.187	4.75				

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance is ±.015 (0.38 mm).
4. Collar available on –003 and –004 only.

FIGURE 1. Dimensions and configuration.





CIRCUIT SCHEMATIC

4 CIRCUIT SCHEMATIC

FIGURE 1. Dimensions and configurations - Continued.

REQUIREMENTS:

Dimensions and configurations: See figure 1.

Enclosure design: 1 (unsealed) (-001 and –002).
1 (unsealed with terminal flux seal) (-003 and –004)

Temperature characteristic: 2 (-65°C to +125°C).

Shock type: M (100 g, test condition I, method 213 of MIL-STD-202).

Vibration grade: 2 (10 Hz to 2,000 Hz swept sinusoidal, 15 g peak).

Weight: .25 ounce maximum.

Operating characteristics: ±20 percent variation from specified values acceptable after test.

Free position .436 inch.

Actuating force 1.5 pounds maximum.

Overtravel .012 inch minimum.

Movement differential .025 ±.010 inch.

Pole transfer coincidence .002 inch maximum (-003 and –004).

Operating point .396 ±.010 inch.

Terminal strength: 5 pounds, when applied perpendicular to the longitudinal axis of the terminals;
9 pounds when applied in other directions

Terminal flux sealing: M8805/77-003 and –004

Test condition:

Switches shall be tested as follows: For each switch circuit, measure and record initial contact resistance. Place switches, terminal down, into shallow pan. Pour flux, in accordance with type symbol B of IPC J-STD-004, specific gravity 0.896, at 80°F ±5°F, into a pan without splashing until level of flux is approximately .0625 inch above the bottom of the switch case, and let switches soak for 10 minutes. Remove switches from flux and immediately place into oven for drying at 175°F ±10°F for two hours. After switches have cooled to room temperature, visually examine the actuator area for evidence of flux and repeat initial measurements. Contact resistance shall not increase by more than 10 milliohms over initial readings.

Dielectric withstanding voltage:

Sea level: 1,000 V rms initial.

1,000 V rms between all terminals and mounting plate after endurance test.

Altitude: 70,000 feet - 400 V rms.

Strength of actuator: 25 pounds.

Logic Level circuit: 1,000,000 cycles

M8805/77-001 and -002: Not applicable

M8805/77-003 and -004: Applicable

Mechanical endurance: 100,000 cycles at .016 ±.001 inch overtravel for –001 and –002.
1,000,000 cycles at .016 ±.001 inch overtravel for –003 and –004.

Electrical endurance: 50,000 cycles for –001 and –002.
100,000 cycles for –003 and –004.

Electrical ratings: See table I and table II.

Part or Identifying Number (PIN): See table III.

TABLE I. Electrical ratings, M8805/77-001 and -002.

Load	Sea level				70,000 ft	
	28 V dc DPDT	28 V dc 4 circuit	115 V ac, 60 Hz DPDT	115 V ac, 60 Hz 4 circuit	28 V dc DPDT	28 V dc 4 circuit
	(amperes)	(amperes)	(amperes)	(amperes)	(amperes)	(amperes)
Resistive	10	10	7.5	5	10	10
Inductive	7.5	5	5	5	3.5	2
Lamp	4	3	3	1.5	---	---

TABLE II. Electrical ratings, M8805/77-003 and -004.

							Logic level
Load	Sea level				70,000 ft		
	28 V dc DPDT	28 V dc 4 circuit	115 V ac, 60 Hz DPDT	115 V ac, 60 Hz 4 circuit	28 V dc DPDT	28 V dc 4 circuit	5 V dc
	amperes	Amperes	amperes	amperes	amperes	amperes	milliamperes
Resistive	8	8	6	4	8	8	10
Inductive	6	4	4	4	2	1	---
Lamp	0.5	0.5	2	1	---	---	---

TABLE III. PIN and terminal configurations.

PIN	Terminal configuration
M8805/77-001 and –003 M8805/77-002 and –004	A (end solder type) B (side solder type)

QUALIFICATION:

Group submission: See table IV.

TABLE IV. Group submission.

PIN	Examination or test	Extent of approval
M8805/77-001 and –003 (all sample units)	Qualification inspection table of MIL-PRF-8805	All
M8805/77-002 and –004 (3 sample units)	Terminal strength	
	Thermal shock	
	Operating characteristics	
	Visual and mechanical examination	
	Flux seal	

Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

Custodians:
Army - CR
Navy - AS
Air force - 11
DLA - CC

Review activities:
Army - AT, AV, CR4
Air force - 99

Preparing activity:
DLA - CC

(Project 5930-1696)